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ABSTRACT

The Corning Community College, having an open-door admissions policy, has been offering a course in achievement motivation for the past two years. The course, requiring about forty-five hours of participation, was started on an experimental basis with specially selected high-risk entering students during the summer of 1969. The main purposes of the course have been: (1) to help students adjust to college life, (2) to provide them with skills in self-exploration that facilitate their career planning, and (3) to increase their motivation in pursuit of their goals. This paper presents research data that were collected over a two year period to assess the effects of the achievement motivation course on several educationally relevant variables. It was hypothesized that achievement motivation training would give rise to increased achievement motivation. The results generally supported the hypothesis, but it was strongly suggested that trainer and trainee personalities have to be considered to gain a more complete understanding of the effects of achievement motivation training. (Author/BW)

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ACHIEVEMENT MOTIVATION TRAINING IN A COMMUNITY COLLEGE SETTING: EFFECTS ON PERSONALITY AND EDUCATIONAL VARIABLES

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There has been much recent emphasis on the applications of psychological education in industrial as well as educational settings. A forerunner in psychological education has been the teaching of achievement motivation. (Alschuler, 1970). The Corning Community College, having an open-door admissions policy, has been offering a course in achievement motivation for the past two years. The course, requiring about forty-five hours of participation, was started on an experimental basis with specially selected high-risk entering students during the summer of 1969. Since then it has been open to any interested students or adults from the community.

The main purpose of the course at our college has been to help students adjust to college life, to provide them with skills in self-exploration that facilitate their career planning, and to increase the students' motivation in pursuit of their goals. The course exposed the students to personal interaction with his peers and provided opportunities to learn and explore various achievement strategies and thoughts.

The present paper reports research data that were collected over the past two years to assess the effects of the achievement motivation course on several educationally relevant variables.

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General Method

This section presents a general overview of the method. For the most part the subjects were male and female freshmen and sophomore college students. Two samples included a small number of counselors and teachers from other institutions. The major sampling procedures involved a random sampling of the total student population (about 2000), random sampling of the required Freshman English classes, and sampling of achievement motivation training sessions.

The assessment measures were usually administered to students before and after achievement motivation sessions, in some cases involving follow-up. Comparisons were also made between students who had taken the achievement motivation course and their control groups.

The main variables assessed were the following: achievement motivation, locus of reinforcement control, psychosocial development indices, self concept of academic ability, drop-out rate, academic achievement, and students' perception of the value of the course in academic skill, interpersonal interaction, and self-awareness areas. The achievement motivation courses were conducted by thirteen different trainers who were on staff at the college.

ACHIEVEMENT MOTIVATION

It was hypothesized that achievement motivation training would give rise to increased achievement motivation as measured by the Mehrabian (1968) scale.

Using pre and post measures as indicators the hypothesis was supported for a sample of fourteen students. Achievement motivation increased significantly ($t = 4.826$, $p < .001$) following the achievement motivation course.

In subsequent samples varying ten to twenty-five in size it was shown that the increase was more consistent for male than female students when males were conducting the course. In one sample, however, conducted by a more dominant female and a less dominant male, the opposite trend appeared: the male students showed no change while the females increased in achievement motivation. These findings suggest rather strongly that trainer and trainee personalities have to be considered to gain a more complete understanding of the effects of achievement motivation training.

LOCUS OF REINFORCEMENT CONTROL[3]

It was hypothesized that achievement motivation courses increase student's beliefs in internal reinforcement control.

Internal reinforcement control was defined as belief that rewards or punishments follow or are contingent upon one's own behavior. Crandall et al.(1965) and McGhee and Crandall (1968) have shown positive relationships between internal reinforcement control, achievement striving, and academic performance in children. The results of a study by Reimanis (1970) suggests that external reinforcement control interfered with teacher's efforts to increase achievement striving in the classroom.

In the present study it was assumed that many college students who come to our classrooms are not prepared to be motivated in the traditional manner. That is, many students believe that their rewards and punishments occur independently of their own efforts; they have a belief in external rather than internal reinforcement control. For such students the process of education may be alien. Grades cannot motivate unless they are perceived as the results of one's own behavior and efforts. For the same reasons, neither can vocational goals motivate the externally controlled individuals.

Lefcourt (1966) suggests that lack of internal control may be a by-product of poverty, and racial and cultural barriers. Thus, it

seems that the variable of internal reinforcement control is of special importance today when higher education is made available to individuals who may come from culturally and economically underprivileged homes.

The author's assumption was that internal reinforcement control is a necessary condition before any growth in achievement motivation can take place. It was also assumed that during the achievement motivation course the student would have ample opportunity to observe his own behavior-effect contingencies in various game situations involving the setting of aspiration levels and simulating achievement strategies. With increased perception of behavior-effect contingencies, there should be an increase in belief in internal reinforcement control.

Method

The subjects were 385 male and female community college day students and fourteen adult and evening students.

To test the hypothesis, Rotter's Internality-Externality (I-E) scale (Rotter, 1966) was administered before, immediately after the course, and again after one to two months, and after seven months following the course.

Results and Discussion

The results showed a rather consistent significant ($p < .01$) increase in internal control following achievement motivation sessions for the student samples. For the community adults the increase was not significant.

After a one to two month period there was a significant ($p<.05$) mean decrease in the internality scores for the follow-up sample of eighty-four students. However, the decrease was not large enough to wipe out all gains in the internality scores from the first administration. A significant increase still remained. There were no significant sex differences. It should be pointed out that the first follow-up data were collected during orientation week; perhaps some of the decrease in internality may have been due to feelings of uncertainty concerning one's role as a college student.

After a seven month period, the initial increase in internal control for eight female students in the second follow-up sample had disappeared. Twenty male students in the second follow-up sample, however, still showed a significant increment in internality.

During the same time period ninety control subjects, that is regular students not taking part in achievement motivation training, showed no increase in their internality scores. These results partially supported the hypothesis. Internality increased significantly after the students had taken achievement motivation. Achievement motivation training had immediate and relatively long-lasting effects on internal control in male students. For females, a significant increase was present immediately and after one to two months after the achievement motivation course but dissipated over the seven month period.

There is not sufficient time to discuss the apparent sex differences.

PSYCHOSOCIAL DEVELOPMENT

The hypothesis was that achievement motivation training has a favorable effect on the students' psychosocial development.

The whole learning process in the course was conducted in a social setting through close interaction with peers and the trainers. It was felt that for college students during their late adolescent stage, when the developmental tasks of reevaluation of beliefs and attitudes take place, and when the development of identity takes on an important role (Erikson, 1959, 1963), exposure to achievement motivation training would have a favorable effect on the student's psychosocial development.

Method

The students came from one sample of twenty-five students who had enrolled in the achievement motivation course during the spring of 1970. A second sample of thirteen individuals consisted of six entering freshmen and seven adults who had enrolled in the course during the early summer of 1970.

To measure psychosocial development a 60-item self-describing scale, based on Erikson's first six stages of psychosocial development, was used. The scale, assessing sucessful and unsucessful resolutions of the stages, was first developed by Wessman and Ricks (1966). It has been used successfully to assess maturity levels (Constantinople, 1969), and relationships between psychosocial development and happiness (Constantinople, 1970), and relationships between psychosocial development and mood (Reimanis, 1966) in college students.

The specific predictions were that the achievement motivation course would increase the individual's feelings of Basic Trust, Autonomy, Initiative, Industry, Identity, and decrease his feelings of Basic Mistrust, Shame and Doubt, Guilt, Inferiority, Role Diffusion, and Isolation.

Results and Discussion

From Table 1 it can be seen that the results from the first sample of twenty-five students supported most of the specific predictions. Only the stage of Initiative vs. Guilt showed no significant mean changes. The most consistent changes supporting the hypothesis were present in the stage of Industry vs. Inferiority, while Identity showed the most significant increase.

Data on the six students from the second sample showed all changes as predicted with the exception of Autonomy, where the change was in the opposite direction. However, only the mean decrease in Shame and Doubt was significant ($p < .05$). The increase for Basic Trust reached the .10 significance level.

For the seven adults in the second sample, the changes were less consistent and none were significant. For the combined sample of the six students and seven adults there was a significant increase in Industry ($t = 2.42$, $p < .05$). There was also a decrease, significant only at the .10 level, in Shame and Doubt ($t = 2.10$), and an increase in Identity ($t = 1.88$, $p < .10$).

The data thus supported the general hypothesis that achievement motivation training facilitates favorable psychosocial development.

Insert Table 1 about here

It is interesting to note that the most consistent and larger effects were on the stages of Industry and Identity. The fact that Industry increased following achievement motivation training is, of course, relatively self explanatory. Sense of Industry has to do with feelings of achievement and motivation, and it is these feelings that the course attempts to facilitate most directly. The increase in Identity supported Erikson's view that during college age this may be the most crucial stage in the psychosocial development. In a sense, the other stages preceding Identity prepare the individual for establishing and recognizing a role for himself. Consequently, the feeling of Identity may have been more sensitive to the experience during the achievement motivation course.

SELF-CONCEPT OF ACADEMIC ABILITY

It was hypothesized that the student's self-concept of academic ability improves as a result of achievement motivation training.

It was assumed that achievement motivation training would strengthen one's feelings of self-confidence in achievement situations, since the course was oriented toward exploring and facilitating a person's achievement thoughts and strategies. Since the training took place in an academic setting, and since the student's thoughts were probably preoccupied with his school work, it was assumed that as a result of achievement motivation training he would also increase in his self-concept as it related to his academic ability.

Method

The instrument used to measure self-concept of academic ability was an adaption for community college use of the College Opinion Survey (Biggs et al, 1970). The measure was initially developed as a self-concept of ability scale by Brookover at Michigan State University.

The measure in the present study consisted of twelve items which the student rated on a four or five point scale. The items were concerned with the student's perception of his own academic progress in relationship to his peers, and his potential for future academic success. Biggs (1970) has shown that the scale was a good predictor of the student's academic achievement even with college aptitude controlled.

To test the hypothesis the self concept scale was administered to two main samples of subjects. The first one was a random sample of 275 subjects from the total student population. This sample was divided further into those who had taken achievement motivation training some time in the past and those who had not, and into high-risk and regular student groups. The second sample consisted of twenty-five regular students who were undergoing achievement motivation training while this study was in progress. To the subjects in the second sample the scale was administered before and after the training session.

Results and Discussion

The results showed no significant differences for the first sample between the achievement motivation and control subjects in the high-risk or regular samples. The regular students as expected, were significantly higher on self-concept as compared to the high-risk students ($t=2.63$, $p<.01$). There were no significant sex differences.

The data from the second sample of twenty-five regular students supported the hypothesis. There was a significant increase in the self-concept of academic ability following the achievement motivation course ($t=3.48$ $p<.01$).

It is difficult to explain why significant self-concept changes were present when measured before and immediately after achievement motivation training, while no significant differences were present when students were compared on this measure a longer time after the training. It is possible that an increase in self-concept due to achievment motivation training dissipates with time. It is also possible that there may be trainer differences, or that with increasing experience the trainers had become more effective.

The self-concept scores showed no relationship to internality scores. Thus, any changes in self-concept were independent of changes in internal reinforcement control.

DROP-OUT RATE

There were several experimental programs in progress at the Corning Community College which permitted all academically weak students to continue their education under special guidance when normally they would have been separated. Consequently, the variable of dropping out in this report refers to students who withdrew from college on their own initiative.

It was hypothesized that fewer students withdraw from college after taking the achievement motivation course as compared to students who have not taken the course.

The hypothesis was based on the assumption that the achievement motivation course helps the student to adjust to college and helps

them formulate their future goals. Since education in today's world is essential, it was felt that students having better understanding of their goals would remain in college to obtain an optimum amount of education.

Method

The subjects were 143 regular and 214 high-risk students who had taken the achievement motivation course, and 962 regular and forty-four high risk control subjects. The withdrawal rates were compared for the fall and spring semesters.

Results and Discussion

The results showed no differences in withdrawal rates during fall or spring semesters comparing the 143 regulars students in the achievement motivation group with their control group.

For the high-risk students, however, there was a trend during the fall semester showing more withdrawals in the achievement motivation group as compared to the control group (χ^2 = 2.60,n.s.). The trend was in the opposite direction for the spring term (χ^2 = 3.28. $p<.10$). This finding suggests that the achievement motivation course may have helped the less academically interested students to decide that their future plans did not include college education at this time, and consequently they withdrew soon after the course. The control group students, not having had the same opportunity to explore their aspiration levels and strategies for career planning, apparently required more than one semester to conclude that they did not want to attend college.

Thus, the hypothesis was not supported, but the results indicated a possible effect that the achievement motivation course may have on withdrawal rate.

ACADEMIC ACHIEVEMENT

The hypothesis was that achievement motivation training increases academic achievement as measured by grade point average.

Even though the achievement motivation course did not deal directly with academic achievement, it was assumed that the course would help the student adjust to college life and permit him to see his own career and academic goals more clearly. Consequently, it was felt that the combination of these factors, plus the observation that the course may increase the student's achievement motivation, would help to prepare him for higher achievement in college. After the course the student may begin to see more clearly the role that education plays in his long range goals and thus studying may becom more relevant.

Method

The subjects came from three main random samples: high-risk students, regular freshmen, and regular sophomores. Each group was further subdivided into those students who had taken achievement motivation training and those who had not. The student's grades were compared for the fall and spring semesters for freshmen, and for the previous year, in addition to fall and spring, for sophomores.

Results and Discussion

There were no significantly larger grade increases for achievement motivation students as compared to their control groups when grades were compared for the semester during which achievement motivation

training took place and the previous semester, though all of the increases were in the predicted direction.

However, when grades were compared between the fall semester during which achievement motivation took place and the following spring semester, there were indications that the achievement motivation groups showed significantly larger grade increases than their control groups.

In Table 2 it can be seen that the high-risk achievement motivation students increased more in their grade-point average from fall to spring than their control group. The increase was significant at the .05 level ($t=2.22$). There was no change for the control group. However, a statistically significant t-value was not obtained when the amount of change in the achievement motivation group was compared against the no-change in the control group. During the spring term, it can be seen that the high-risk achievement motivation group had significantly higher grades than the control group. It should be of interest that the grade variances of the two groups during the fall semester were also significantly different ($F=2.84$, $p<.01$). The control group had the higher variance. This may have accounted for the lack of significance between the grade increases.

The significantly higher variance for the control group also seems to be in line with the earlier findings that a larger number of high-risk students taking the achievement motivation course withdrew from college during the fall term, while during the spring term the opposite situation was the case. Possibly in the control group there were more students who were not really interested in education but had not set any alternative plans for their futures as compared with the achievement motivation students.

Insert Table 2 here

Some sex differences were apparent in the grade comparisons. The females in the high-risk achievement motivation group tended to have higher grades than the males. This was also true for the freshmen and sophomore regular students. However, in the high-risk control group the females tended to have lower grades than males, suggesting that the high-risk achievement motivation group was more similar to the regular students than the control group.

For the freshman sample, as seen in Table 2, the grade increase for the achievement motivation group was not significantly larger than that for the control group. However, when the two sexes were considered separately there was a significantly larger grade increase for achievement motivation males (M= 1.83 to 2.33) as compared with the control group (M= 2.31 to 2.30). The t-value was 2.46 ($p < .02$, N=93). The females in the two groups had exactly the same amount of increase.

The data from the 168 sophomore students, as shown in Table 2, supported the hypothesis. Students with achievement motivation training had significantly greater grade increases from fall to spring terms as compared to the control group.

The results thus supported the hypothesis. Achievement motivation training increased academic achievement. The increases were not significant during the semster when the course was in progress but became so in most cases during the semester following the course.

Value of the Achievement Motivation Course as Perceived by Students

This final section reports on how students perceived in retrospect the value of the achievement motivation course in academic skill, interpersonal interaction, and self-awareness areas.

The subjects were twenty-nine students who responded to the questionnaire. All had taken the achievement motivation course some time during the past year, and were pre-registering for their next academic year. A total of fourty questionnaires had been sent out at the time of pre-registration. The students were asked to rate the value of the course and to make comments regarding its effectiveness.

Eighty per cent of the students stated that they were satisfied with the course at least to some degree. Ten per cent were not sure and ten per cent were not satisfied.

Sixty-six per cent of the students perceived the course as having contributed to academic performance at the college, planning for future, and social interaction on campus. Ninety per cent felt that the course had helped them to know themselves better. Sixty-eight per cent felt that the course had helped in reviewing future plans. Ninety-six per cent stated that they would recommend the course to their friends. No one stated that they would not recommend the course.

The majority of comments stressed the feeling that the course was one of the most valuable educational experiences that permitted the students to re-examine, change, or strengthen their goals in college, and permitted them to see more clearly how college experience can be meaningful.

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TABLE 1

Pre- and Post-Achievement Motivation Training Means and t-Values on First Six Stages of Erikson's Psychosocial Development (N = 25)

Developmental Stage	Pre-test Mean	Post-test Mean	t	p
Basic Trust	23.32	25.20	2.58	.02
Basic Mistrust	12.12	13.16	1.22	n.s.
Autonomy	23.00	25.12	2.80	.02
Shame and Doubt	15.68	15.38	1.00	n.s.
Initiative	27.28	28.32	1.00	n.s.
Guilt	15.20	14.76	1.00	n.s.
Industry	23.56	25.80	2.72	.02
Inferiority	18.40	16.64	2.20	.05
Identity	23.20	25.56	3.87	.001
Role Diffusion	17.28	16.79	1.00	n.s.
Intimacy	26.84	28.89	2.96	.01
Isolation	14.32	14.72	1.00	n.s.

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TABLE 2

Fall and Spring Semester Mean Grade-Point Averages
and t-Values for the Three Achievement Motivation Samples
and Their Control Groups

		Fall Term		Spring Term		
Group	N	M	t^1	M	t^1	t^2
High-Risk Ach.	100	1.82		1.94		
			1.50		3.33**	1.02
High-Risk Contr.	30	1.64		1.64		
Freshmen Ach.	19	2.13		2.38		
			1.71		1.00	1.60
Freshmen Contr.	174	2.42		2.47		
Soph. Ach.	61	2.45		2.69		
			2.00*		1.00	2.12*
Soph. Contr.	107	2.65		2.72		

* significant at the .05 level

** significant at the .01 level

[1] t-values between mean grade-point averages between achievement motivation groups and their controls

[2] t-values between mean differences from fall to spring semester between achievement motivation groups and their controls

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FOOTNOTES

[1] Most of the present research was carried out in conjunction with a project supported by the U.S. Department of Health, Education, and Welfare, Office of Education, VEA No. 70-2-458.

[2] The author feels indebted to the individuals who conducted the achievement motivation training sessions and who assisted in data collection.

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